

**ETA-S20**  
**AC Power Distribution Unit & Surge Suppressor**



**ETA**  
**S Y S T E M S™**  
*Leading by Design.™*

**ETA-S20**  
**AC Power Distribution Unit &**  
**Surge Suppressor**



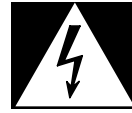
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## SAFETY INSTRUCTIONS



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other device (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the device. When a cart is used, use caution when moving the cart/device combination to avoid injury from tip-over.
13. Unplug this device during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **WARNING:** To reduce the risk of fire or electric shock, this device should not be exposed to rain or moisture and objects filled with liquids, such as a vase, should not be placed on this device.
16. To completely disconnect this equipment from the mains, disconnect the power supply cord plug from the receptacle.
17. The mains plug of the power supply cord shall remain readily operable.





### **WARNING – WHEN THE DEVICE IS IN USE**

- To prevent electric shock, do not remove the product cover as there are high voltage components inside. Refer all servicing to ETA Systems.
- Should any of the following irregularities occur during use, immediately switch off the power, disconnect the power cord from the AC outlet and contact ETA Systems. Do not attempt to continue operation with the product as this may cause fire or electric shock:
  - Smoke or strange smell coming from the unit.
  - If the product falls or the case is damaged.
  - If water or any metallic objects falls into the product.
  - If the power supply cord is damaged in any way.
  - If the unit is malfunctioning.
- Do not insert or drop metallic objects or flammable materials into the ventilation holes of the product's cover, as this may result in electric shock or fire.
- Do not place any containers with liquid or metallic objects on the top of the product. If any liquid spills into the unit, fire or electric shock may result.
- Never operate this product or touch the power supply cord during an electrical storm, electric shock may result.
- Never exceed the power rating on the product when connecting equipment. Fire and/or property damage may result.
- Operate the product only with the voltage specified on the unit. Fire and/or electric shock may result if a higher voltage is used.
- Do not modify, kink, or cut the power cord. Do not place the power cord in close proximity to heaters and do not place heavy objects on the power cord, including the product itself, doing so may result in fire or electrical shock.
- Replace the protective cover over the speaker terminals after installation. Do not touch the 70V speaker terminals as electric shock may result.
- Ensure that the safety ground terminal is connected to a proper ground. Never connect the ground to a gas pipe as a catastrophic disaster may result.
- Be sure the installation of the product is stable, avoid slanted surfaces as the product may fall and cause injury or property damage.



### **CAUTION – WHEN INSTALLING THE PRODUCT**

- Plugging in or unplugging the power cord with wet hands may result in electric shock.
- Never move the unit with the power cord plugged into the wall, as damage to the power cord may result.
- When unplugging the cord from the wall, grasp the plug, NOT the cord.
- Never install this product in humid or dusty locations, nor in direct sunlight, near sources of heat, or in areas where sooty smoke or steam are present. Fire and electric shock may result.
- Keep all sides of the unit at least 3½" away from objects that may obstruct air flow to prevent the unit's internal temperature rise.



### **CAUTION – WHEN THE DEVICE IS IN USE**

- When powering the product up for the first time, ensure that the level control is turned down. Unexpected high sound pressure levels may be present at the speakers and result in hearing loss.
- Never place heavy objects on the product, causing it to fall and/or break, resulting in personal injury and property damage. In addition, the product itself may fall and cause injury and property damage.
- Never operate the product for extended periods with the sound in a distorted condition. This is an indication of a malfunction, which may result in excessive heat being generated and causing a fire.
- Contact ETA Systems for instructions on cleaning the inside of the unit. Large accumulations of dust inside the unit may result in heat buildup and fire.
- Ensure that the power supply plug is securely plugged into the wall outlet. Never allow dust to accumulate on the power plug or inside the wall outlet.
- When cleaning the unit or the unit is not to be operated for an extended period, unplug the power cord from the wall.



# ETA-S20

## AC Power Distribution Unit & Surge Suppressor



### INTRODUCTION

Thank you for purchasing the ETA Systems ETA-S20 AC Power Distribution & Surge Suppressor Unit. The ETA-S20 has been designed to meet most installation requirements for AC power distribution and equipment power protection.

The ETA-S20 features noise filtering for unwanted Radio Frequency Interference (RFI) that is commonly introduced into AC lines by nearby radio transmitters or wireless products. The benefit of these filters can be seen on video products or audibly by reducing static pops and external signal interference in sound reinforcement systems.

Unstable AC Mains voltage is one of the main reasons for equipment failure. The amount of energy that can be injected into the power system can be immense with voltages reaching 6kV or current peaks of 3000A. These spikes are very fast and usually only last for a very short period of time. The ETA-S20's circuitry is very fast and can suppress unwanted energy within a nanosecond response and sustain the suppression up to 2 milliseconds, thus ensuring virtually trouble-free protection. If the suppression circuitry is damaged, the AC Protect LED will turn Off to indicate a fault has occurred.

The ETA-S20 offers power management control, noise filtering, and protection against abnormal voltages, spikes, and surges.

### KEY FEATURES

- 9 Total Outlets
  - 7 Rear Panel Switched Outlets
  - 1 Rear Panel Unswitched Outlet
  - 1 Front Panel Unswitched Convenience Outlet
- 12 gauge 9' (2.74m) Cord
- RFI Noise Filtering to Reduce Radio Frequency Interference
- Circuit Breaker Protection 20A
- Voltage Protection Rating
  - Clamping Voltage L-N: 400, L-G: 500, N-G: 400 / 3KA, 8/20 $\mu$ s
  - Max. Spike Clamping Voltage 6KV, 1.2/50 $\mu$ s
- AC Protect Active Indicator

### APPLICATIONS

The ETA-S20 was designed to be flexible with features that allow it to be used in a variety of applications. The ETA-S20 can be used solely for protection against voltage surges or for AC distribution. If fuzzy video or frequent static pops occur, AC power conditioning may eliminate or reduce those inconveniences. The following are just a few examples of applications where the ETA-S20 can be used:

- Restaurants
- Houses of Worship
- Schools
- Home Theaters
- Office Buildings
- Sports Bars



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## FRONT PANEL FEATURES



### 1. Unswitched AC Outlet

The 120VAC 20A NEMA 5-20R outlet is always live when the ETA-S20 power cord is plugged into an AC Mains power source and voltage is present. **Note:** The AC Mains power switch does not affect the Unswitched AC Outlet. The Unswitched Outlet is protected by the surge protection circuitry.

### 2. AC Mains Breaker

The 120VAC 20A 2500W rated breaker will open if the combined draw of all AC outlets exceeds 20A. **Note:** The breaker is designed to exceed its rating for a short period of time. If the breaker is tripped, you must first remove the load from the ETA-S20 and then push to reset.

### 3. Power Switch

To turn the ETA-S20 On or Off, press the switch to the ON or OFF position. This switch powers the “switched” outlets. The switch will illuminate Red when it is in the ON position.

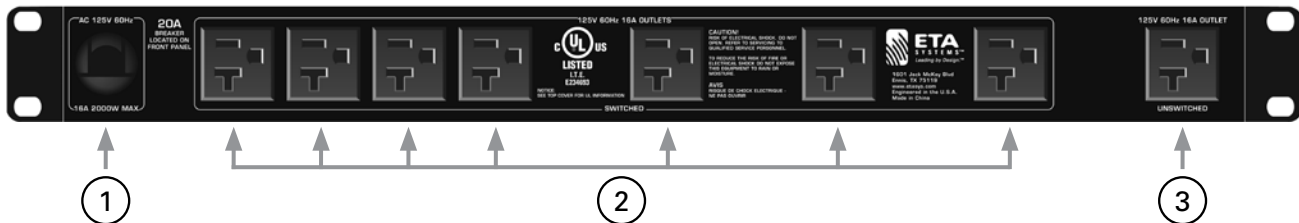
### 4. Power AC Present LED

Will illuminate Red when the AC Mains Power Switch is in the ON position.

### 5. AC Protect Active LED

Although the Clamping Suppression circuit virtually assures protection from most transient voltage spikes and surges, nature has a way of occasionally creating electrical forces that are beyond the capabilities of any device to absorb without some degree of damage. In the rare instance that this occurs and the circuit has been damaged, the Green “AC Protect Active” LED indicator will turn Off, indicating that the AC Protect Circuitry is no longer protecting equipment connected to the Switched outlets. The unit will still operate as an AC distribution unit but the surge suppressor protection will not function until the unit is repaired. **Note:** Be advised that activation of this fault condition and the associated repair is not covered under warranty. If the AC Protect is disengaged, it is important to have all equipment that was connected to that AC Mains Line be inspected for proper operation.

## REAR PANEL FEATURES



### 1. AC Mains Input

Connect the 12 gauge 9' (2.74m) power cord to a 20A 120VAC outlet to provide power to the ETA-S20.

### 2. AC Power Outlets Switched

Seven 120VAC 20A NEMA 5-20R outlets are “Live” when the front panel power switch is activated.

### 3. Unswitched AC Outlet

The 120VAC 20A NEMA 5-20R outlet is always live when the ETA-S20 power cord is plugged into an AC mains power source and voltage is present. **Note:** The AC mains power switch does not affect the Unswitched AC Outlet. The Unswitched Outlet is protected by the surge protection circuitry.



# ETA-S20

## AC Power Distribution Unit & Surge Suppressor



### INSTALLATION

Before installing, we strongly suggest you read the entire manual to ensure you benefit from all the features of the ETA-S20. The ETA-S20 can be placed on a shelf or rack mounted in a standard 19" width rack. When rack mounted, placement within the rack is flexible however the ETA-S20 should be within 6' of a dedicated 20A AC outlet. When rack mounting, use Rack Rail type screws which are 1/32" x 1". Always make sure the 20A outlet is properly inspected by a certified electrician prior to connecting the ETA-S20. Make sure to inspect the equipment that is to be plugged into the ETA-S20 to ensure it does not exceed 20A total amperage draw.

### SPECIFICATIONS

Type	AC Power Distribution & Surge Suppressor
<b>Front Panel</b>	
Outlets	20A NEMA 5-20R, 1 Unswitched
Activation Switch	Rocker, Illuminates Red when in the ON position
Circuit Breaker	20A Resettable
Indicators	AC Power ON Red, AC Protect Active ON Green
<b>Rear Panel</b>	
AC Outlets	NEMA 5-20R, 8 Outlets total: 7 Switched, 1 Unswitched
AC Mains Power Cord	9' (2.74m), 12 gauge, AC Plug NEMA 5-20P
<b>Technical Data</b>	
Current Rating	Limited to 16A 2000W Continuous
Current Protection	20A AC Mains Breaker
Operating Voltage	102VAC – 132VAC
MOV - New Generation	Qty. 3 Hot to Neutral, Hot to Ground, Neutral to Ground
Clamping Voltage	L-N: 400, L-G: 500, N-G: 400 / 3KA, 8/20 $\mu$ s
Max. Spike Clamping Voltage	6KV, 1.2/50 $\mu$ s
Max. Spike Clamping Resp. Time	<1 nanosecond
Maximum Surge Current	45000A, 8/20 $\mu$ s
Energy Rating	900 Joules, 8/20 $\mu$ s
Noise Attenuation EMI/FRI	40dB @ 10kHz - 100MHz
Temperature Range	5° – 35°C
Humidity Range	5% to 95% R.H.
<b>Mechanical</b>	
Chassis Finish	Black
Mounting	Rack Mount, 1 RU
Height	1.75" (1RU, 44.5mm)
Width	19" (482.6mm)
Depth	3.75" (95.5mm)
Weight	5.5 lbs (2.49kg)
Power Consumption	800 milliwatts
Agency Listings	UL and cUL Listed



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### LIMITED WARRANTY

All products manufactured by ETA Systems are warranted to the original dealer/installer, industrial or commercial purchaser to be free from defects in material and workmanship and to be in compliance with our published specifications, if any. This warranty shall extend from the date of purchase for a period of one year. Additionally, fuses and lamps carry no warranty. ETA Systems will solely at its discretion, replace at no charge or repair free of charge defective parts or products when the product has been applied and used in accordance with our published operation and installation instructions. We will not be responsible for defects caused by improper storage, misuse (including failure to provide reasonable and necessary maintenance), accident, abnormal atmospheres, water immersion, lightning discharge, or malfunctions when products have been modified or operated in excess of rated power, altered, serviced or installed in other than a workmanlike manner. The original sales invoice should be retained as evidence of purchase under the terms of this warranty. All warranty returns must comply with our returns policy set forth below. When products returned to ETA Systems do not qualify for repair or replacement under our warranty, repairs may be performed at prevailing costs for material and labor unless there is included with the returned product(s) a written request for an estimate of repair costs before any non-warranty work is performed. In the event of replacement or upon completion of repairs, return shipment will be made with the transportation charges collect.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PREVENTS THE LIMITATION OF CONSEQUENTIAL DAMAGES FOR PERSONAL INJURY, ETA SYSTEMS SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT, CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING OUT OF THE INSTALLATION, USE OR INABILITY TO USE THE PRODUCTS. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

ETA Systems does not assume, nor does it authorize any other person to assume or extend on its behalf, any other warranty, obligation, or liability. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

### SERVICE

Should your ETA-S20 require service, please contact the ETA Systems warranty department at 1-877-689-8055, ext. 277 to obtain an RA number.

ETA Systems Tech Support can be reached at 1-800-321-6699.

Visit our web site at [www.ETAsys.com](http://www.ETAsys.com) to see other ETA Systems products.



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